Motor Vehicle Occupant Injury[1]

Summary

Motor vehicle crashes are the most frequent cause of injury death for Washington children 0-17 years old. Teens ages 15-17 had the highest rate of motor vehicle occupant deaths and hospitalizations. Motor vehicle occupant hospitalizations were more likely to occur to children in rural areas. About 45 percent of the Washington children who died were unrestrained by a child safety seat or seatbelt at the time of their death. Forty-three percent of deaths occurred in the evening between 5 p.m. and 12 midnight.

Motor vehicle occupant injuries can be prevented by increasing the availability of child safety seats and education to parents, enforcing the graduated licensing law for teen drivers, and enforcing seat belt and child safety seat laws for vehicle occupants.

Real Stories of Motor Vehicle Crashes Involving Washington Children

Leslie, age 10, and Beth, 9 months old, were riding with their parents in a pickup truck. The truck hit a patch of ice, spun out of control, and rolled over numerous times. Beth was in a car seat and the rest of the family had their seat belts on. Despite, the damage to the truck, the whole family came away from the crash without a scratch.

Sarah, age 3, was riding in a car driven by her parent. She was in the back seat, but not in a car seat. The car was hit by another car, driven by a young adult drag racing on a public road. Sarah died in the crash.

Andrew, age 17, was under the influence of alcohol, speeding, and not paying attention to his driving because of the two other teens in the car. The car hit a barrier, ran off the road and overturned. One of the passengers was wearing a seatbelt, and was not injured. The driver and other passenger, who were not wearing seatbelts, were ejected from the car and died.

[1] Injuries to occupants of motor vehicles including automobiles, vans, trucks, motorcycles, and other motorized cycles known or assumed to be traveling on public roads or highways.

- Children under 8 years old or whose height is less than 4'9" must use an appropriately sized child safety seat. An expert should check the safety seat for proper installation. **All children ages 12 and under should ride in the back seat. Children must use safety restraints on every ride.**
  - Infants should ride in rear-facing child safety seats until they are at least 1 year old and at least 20 pounds. Never place a rear-facing infant in the front seat of a car equipped with an active airbag. Parents who are expecting a newborn infant should watch for infant car seat sales throughout the pregnancy.
  - Children ages 1-4 weighing between 20 and 40 pounds can ride in forward-facing child safety seats. For optimal protection, children should remain in rear-facing convertible seats until reaching the maximum weight for the car safety seat, as long as the top of the head is below the top of the seat back. Many convertible seats have maximum weights of 30 pounds.
  - Children ages 4-8 weighing more than 40 pounds should ride in booster seats – always used in conjunction with a lap and shoulder belt.
  - Children over 8 years old or 4'9" tall should use an appropriately fitting, properly worn lap and shoulder belt. The lap portion should be worn snug and low on the hips, touching the top of the thighs; the shoulder portion should cross the center of the chest and shoulder.
- For teens:
  - Parents should know the rules of Washington's graduated driver licensing system and enforce them with their teen drivers.
  - Teens should follow the rules set by the graduated drivers license system. This means they can obtain an Intermediate Driver License at 16 years of age. The intermediate license has certain limitations that must be followed during the first year, including:
    - No driving between 1 a.m. and 5 a.m., unless accompanied by parent, guardian, or licensed driver at least 25 years old. All nighttime driving is far riskier for newly licensed teens than for experienced drivers.
    - For the first six months, no passengers under age 20, except family members.
    - For the second six months, no more than three passengers under age 20.
  - Teens should correctly wear a seatbelt every time they are riding or driving in a vehicle.
  - Encourage teens never to drive impaired.
- Parents should model seatbelt use, drive at posted speed limits, avoid distractions like eating or using cell phone while driving, and demonstrate safe, sober driving behaviors.

- Support law enforcement of speed limits.
- Enforce the primary seat belt law, which allows police officers to stop vehicles with unbelted occupants of any age (RCW 46.61.688).
- Increase enforcement at specific locations and times to target violations of safety belt laws.
- Plan, implement, and evaluate media campaigns that publicize the enforcement activity.
- Support enforcement of the primary child safety seat law, which allows police officers to stop vehicles for failing to properly restrain children less than 6 years old (RCW 46.61.687).
- Provide education along with approved child safety seats and booster seats to low-income parents through purchase based on a sliding scale, giveaways, or short-term loans.
- Increase the availability and accessibility of child safety and booster seats.
- Use special enforcement strategies (e.g. checkpoints when possible, dedicated law enforcement programs, or alternative penalties) to enforce existing child safety seat laws.
- Implement community-based child passenger safety programs. For example, use media support, child safety seat check stations and child safety seat displays in public places to promote use.
- Enhance the availability and accessibility of trained child passenger technicians, who can inspect the installation of child safety and booster seats.
- Support enforcement of Washington's graduated driving license law (RCW 46.20.075).
- Support enforcement of the underage impaired driving law, which penalizes drivers younger than 21 with a blood alcohol content (BAC) of .02 or higher (RCW 46.61.503).
- Emphasize increasing seat belt usage in rural communities through enhanced enforcement programs and media campaigns that publicize the enhanced enforcement.
- Enhance availability of emergency medical services in rural areas.

Number of Injuries[2]

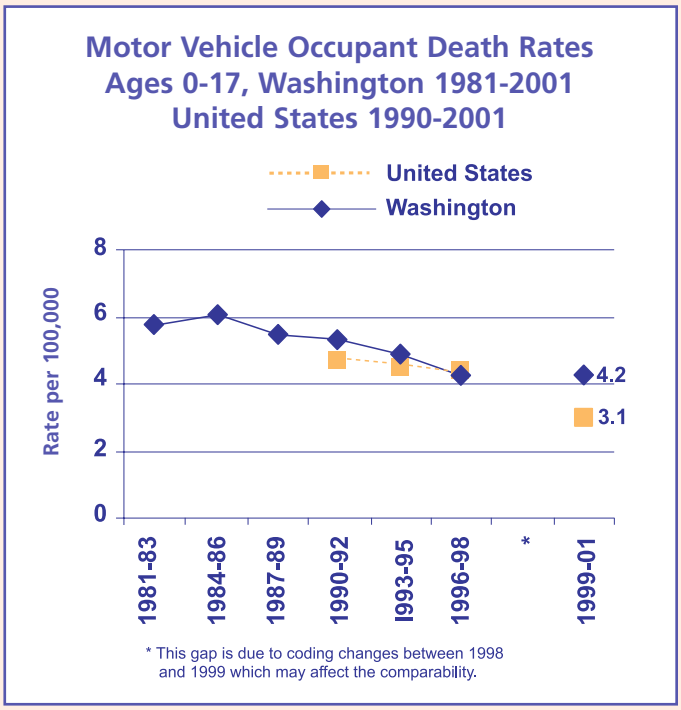
During 1999-2001, motor vehicle crashes were the most common cause of injury death and hospitalization for Washington children 0-17 years old. Motor vehicle occupant injuries among Washington children 0-17 years old account for an annual average of:

- 64 deaths.
- 355 hospitalizations hospitalizations.
- An estimated 10,600 visits to a hospital emergency department.

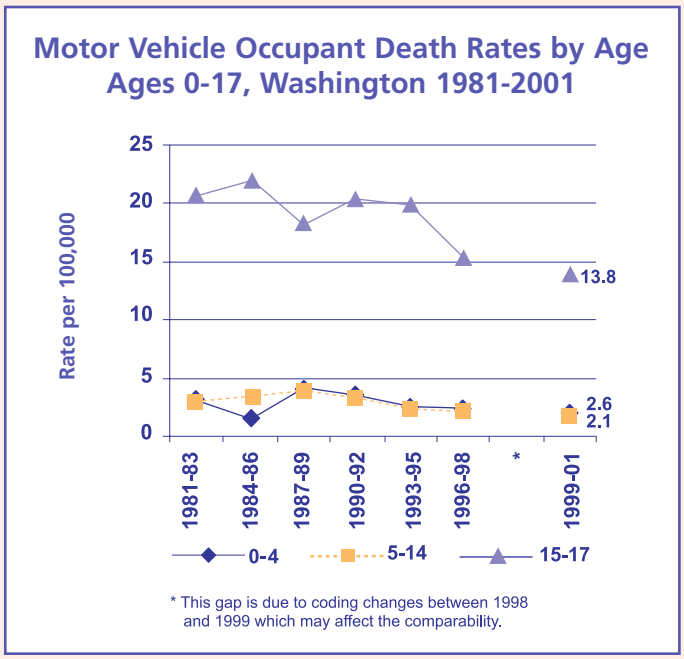
Time Trends[3]

From the three-year time period of 1981-83 to 1999-2001, there was a statistically significant decline in the motor vehicle crash death rate for Washington children from 5.8 to 4.2 per 100,000. This represents about a 28 percent decrease in the motor vehicle crash death rate.

Motor vehicle occupant death rates in Washington were similar to national rates[4] during 1990-1998. However, during 1999-2001 Washington rates were higher than national rates.



The 15- through 17-year-old group was the only age category that showed a statistically significant decline.



Intent

All Washington motor vehicle occupant deaths and hospitalizations were classified as unintentional.

[2] Unless otherwise specified, data are for motor vehicle occupant injuries among children 0-17 years old during 1999-2001, except in the urban and rural section, which are for 1997-2001. Rates are per 100,000 children who are Washington residents.

[3] See Comparability Ratio section in Appendix D.

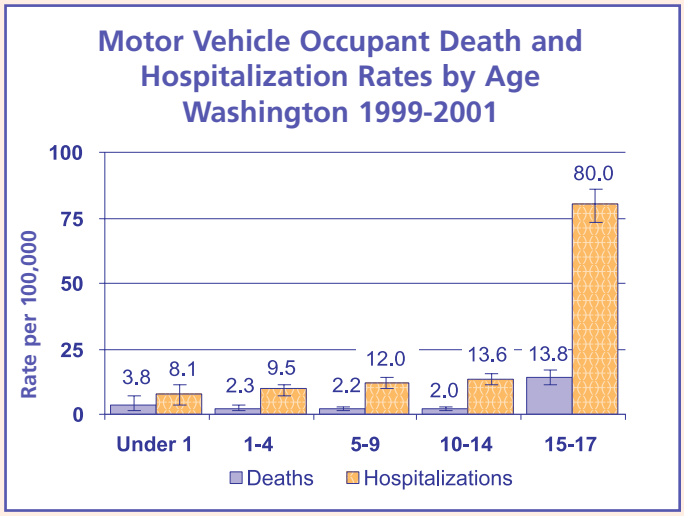
[4] National injury death rates for children 0-17 years old are not available prior to 1990.

Age and Gender

The 15-17 age group had the highest rate of deaths and hospitalizations.

Males 15-17 years old had a death rate 1.5 times higher, and a hospitalization rate 20 percent higher than females.

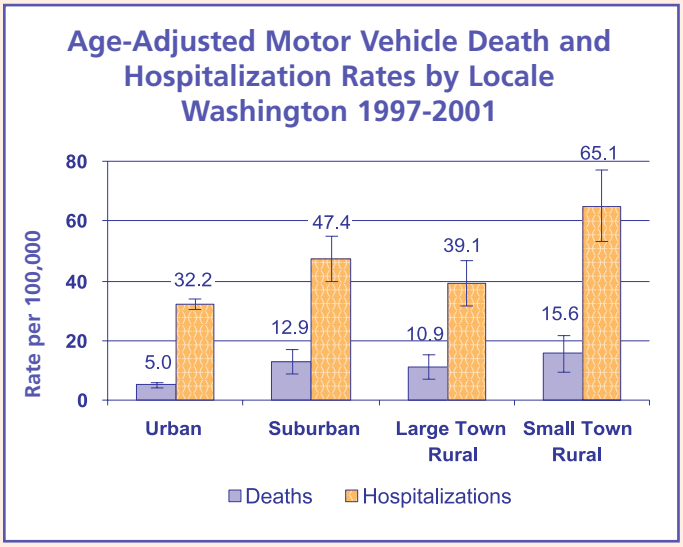
Data from Washington's Fatal Accident Reporting System (FARS) show that drivers ages 15-20 were more likely to be speeding, overcorrect, drive in a reckless or negligent manner, drive inattentively or distractedly, disobey signs, signals, or officers, and engage in improper passing compared to drivers over 21 years old.



Urban and Rural

Age-adjusted[5] motor vehicle occupant death and hospitalization rates were lowest for Washington children in urban core areas and highest in rural small towns.

Data from Washington's FARS show lower safety restraint use among children who are killed in a motor vehicle crash in rural parts of the state compared to urban areas. Higher injury rates in rural areas may also reflect relatively poorer driving conditions (e.g., less road maintenance, higher motor vehicle speeds, less seat belt use, smaller roads, and no physical barriers between opposing traffic flows), greater severity of injury, and delayed pre-hospital care.



Collisions Per Vehicle Miles Traveled

Data from the Washington Traffic Safety Commission show that Washington teen drivers (15-17 years old) are at higher risk of being in a collision, even after adjusting for the number of miles traveled in a vehicle.

[5] See Specific Rates section in Appendix A for discussion of age-adjustment.

Circumstances Surrounding Deaths from Washington Child Death Review Data

Local child death review teams reviewed 141 out of the 192 motor vehicle occupant deaths during 1999-2001. Key findings include:

- Driver error (57 percent) and excess speed (45 percent) were the most common contributing factors.
- In seventy-three (52 percent) of the 141 deaths, the driver was less than 20 years old.
- Impairment by or use of alcohol and/or other drugs was a factor in 42 (30 percent) of the deaths reviewed. The youth was impaired in 14 of the deaths, the supervising adult in nine, the driver of the other vehicle in 18, and other passengers in four.[6]
- Sixty-four (45 percent) were unrestrained at the time of their death.
- Of the 22 children 4-8 years old who died, only one (5 percent) was in a booster seat.
- An airbag contributed to three deaths (2 percent), two were children less than 13 years old.
- Sixty-one (43 percent) occurred between 5 p.m. and 12 midnight.
- Teams concluded that 87 percent of the 141 motor vehicle occupant deaths were preventable, 7 percent were not preventable, and the teams were unable to determine preventability for 6 percent.

Seventy-eight of the 141 child deaths of motor vehicle occupants were teens (15-17 years old). Key findings specific to teens include:

- A teen (15-17 years old) was driving in 48 (62 percent) of the teen deaths.
- Of the 48 teen deaths where a teen was driving, 25 (52 percent) had at least one other teen in the car.
- Forty (51 percent) of teens were not wearing a seatbelt at the time of their death. For 15 (19 percent), there was no information available about their use of a seatbelt for local team review.
- Impairment by or use of alcohol and/or other drugs was a factor in 31 (40 percent) of the teen deaths. The youth was the one impaired in 13 of the deaths, the supervising adult in four, the driver of the other vehicle in 14, and other passengers in one.[6]
- Thirty-three of the 78 teen deaths (42 percent) occurred between 5 p.m. and 12 midnight.

[6] Persons impaired may total more than the number of deaths because more than one party could have been impaired.